MAUL FOSTER ALONGI
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August 18, 2009
Project No. 8128.01.20

Mr. Dana Bayuk
Oregon Department of Environmental Quality
2020 SW 4th Avenue
Portland, Oregon

Re: Response to Comments Regarding Performance Effectiveness Plan
Siltronic Corporation
7200 NW Front Avenue, Portland, OR
ECSI #183

Dear Dana:

Maul Foster & Alongi, Inc. (MFA) has prepared the following letter in response to comments from the Oregon Department of Environmental Quality (DEQ) which were submitted in a letter dated August 12, 2009. The comments were directed to the Enhanced *in situ* Bioremediation (EIB) Performance/Effectiveness Plan (PEP), as submitted to DEQ by MFA on June 30, 2009. The EIB work is being performed in accordance with the requirements of the *Order Requiring Remedial Investigation (RI) and Source Control Measures* (the Order), No. VC-NWR-03-16, issued to Siltronic Corporation (Siltronic) on February 9, 2004.

DEQ's comments raise issues that will require further analysis and resolution in the EIB Performance Monitoring Plan (PMP) and other submittals. The following comments address DEQ's objectives for the content of the PMP as summarized in the bullets on page 2 of the letter.

- Regarding sampling and analysis in Group 1 and 2: As noted in previous communications and summarized in the attached Table, TCE concentrations in 21 of the 23 Group 1 and 2 performance monitoring wells (PMWs) are below the injection threshold and meet Remedial Action Objective (RAO) 1. MFA understood from verbal consensus reached during meetings with DEQ on June 16 and July 23, 2009 that a bimonthly sampling schedule was approved for these wells. Based upon the meeting outcomes, Siltronic requests approval of this modification to the EIB Workplan in order to continue monitoring in compliance with DEQ objectives.

- Regarding sampling of angled PMW WS-24-155: MFA continues to collect samples from this Group 3 well on a monthly basis consistent with the workplan. The PMP will include further analysis of the data objectives of this well in the context of updated data from the other Group 3 wells, and recommendations for next steps if TCE and its degradation products are not detected in future samples.

- Regarding sampling frequency of the Group 3 PMWs: MFA will continue to collect samples from the Group 3 PMWs on a monthly basis. Of the 10 Group 3 PMWs (i.e., excluding WS-24-155):

    - TCE and its degradation products are below the Joint Source Control Screening Level Values (SLVs) in four PMWs;

    - TCE and its degradation products demonstrate well-established declining trends in four PMWs;

    - TCE and vinyl chloride demonstrate well-established declining trends in two PMWs, with mixed results for cis-1,2-DCE.

  The observations above will be discussed further in the PMP in the context of documenting progress toward RAO 2 (meeting SLVs in the Group 3 PMWs) and the anticipated duration of the monthly monitoring requirement.

- Regarding plans for re-injection: Based on the three years of data collected to date from the pilot study wells, MFA does not anticipate that TCE concentrations will rebound above the injection threshold. However, the PMP will identify contingency alternatives, including but not limited to reinjection, if data from the Group 1 and 2 PMWs indicate that RAO 1 is not being met. The PMP will identify trend criteria for evaluating progress toward RAO 2 for those Group 3 PMWs that have not met RAO 2. The PMP will also identify contingency measures including but not limited to reinjection if the trend criteria conclusively indicate that such measures are warranted.

- Regarding DEQ's request for REMCHLOR model input parameters: MFA will provide alternative input parameter lists as requested and the results of model runs, including the ability of the model to meet calibration targets based on data from Group 1, 2 and 3 PMWs using the alternative inputs.

Please call either of us at (971) 544-2139 if you have questions or comments.

Sincerely,

Maul Foster & Alongi, Inc.

James G.D. Peale, RG
Senior Hydrogeologist

Ted Wall, PE
Principal Engineer

Attachment: Table 1

cc: Tom McCue, Siltronic Corporation (electronic and hard copy)
Alan Gladstone, Davis Rothwell Earle and Xochihua (electronic and hard copy)
Chris Reive, Jordan Schrader Ramis (electronic and hard copy)
Jim Anderson, DEQ (electronic)
Kristine Koch, EPA (electronic)
Sean Sheldrake, EPA Seattle (electronic)
Rene Fuentes, EPA Seattle (electronic)
Eric Blischke, EPA Portland (electronic)
Chip Humphrey, EPA Portland (electronic)

Table 1
TCE in Groundwater
Group 1 and 2 PMWs
Siltronic Corporation
Portland, Oregon

Well ID	Group	Date	TCE (ug/l)
WS-13-69	1	7/16/2009	11,000
WS-15-85	1	7/23/2009	**1.56**
WS-19-101	1	7/16/2009	**0.38**
WS-19-71	1	7/16/2009	**1.55**
WS-30-96	1	7/20/2009	**2,990**
WS-31-106	1	7/23/2009	**2.93**
WS-32-106	1	7/22/2009	**139**
WS-32-76	1	7/22/2009	**821**
WS-34-106	1	7/16/2009	**0.75**
WS-34-71	1	7/16/2009	**44.8**
WS-35-106	1	7/22/2009	**565**
WS-35-76	1	7/22/2009	**318**
WS-37-51	1	7/22/2009	**3.17**
WS-18-101	2	7/20/2009	**1,340**
WS-18-71	2	7/20/2009	**1,060**
WS-33-106	2	7/21/2009	**58.9**
WS-33-81	2	7/21/2009	**1,150**
WS-36-106	2	7/21/2009	**316**
WS-36-81	2	7/21/2009	**105**
WS-38-61	2	7/22/2009	**1.34**
WS-39-101	2	7/20/2009	68,700

Numbers in **bold** are in compliance with RAO 1.